



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,088	10/03/2005	Marc Fleury	612.44794X00	2809

20457 7590 10/20/2006

ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

VARGAS, DIXOMARA

ART UNIT PAPER NUMBER

2859

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/527,088	Applicant(s) FLEURY ET AL.	
	Examiner Dixomara Vargas	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>03/10/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Baldwin (US 5,162,733 A).

With respect to claim 1, Baldwin in the US Patent 5,162,733 discloses a method for measuring the wettability of a porous rock sample in the presence of water and oil, characterized in that it comprises determining the water wet pore surface and the oil wet pore surface when the sample is saturated with water and oil, and calculating the wettability index by combination of the values obtained for said surface (Abstract, columns 2 and 9, lines 45-50 and 40-30).

3. With respect to claim 2, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that determination of the water wet pore surface and of the oil wet pore surface when the sample is saturated with water and oil is obtained by means of measurements of relaxation times (T1, T2) of the sample placed in a nuclear magnetic resonance device (column 4, lines 27-45).

4. With respect to claim 3, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that the wettability index is obtained by the relation:

Art Unit: 2859

(Equation 1) where SM_w is the water pore surface and SM is the oil wet pore surface when the porous medium is saturated with water and oil (column 9, lines 1-30).

5. With respect to claim 4, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that the wettability index is obtained by the relation:

(Equation 2) where SM_w is the water pore surface and SM is the oil wet pore surface when the porous medium is saturated with water and oil (column 9, lines 1-30).

6. With respect to claim 5, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that the wettability index is determined by the following operations:

- a) measuring the characteristic relaxation times of the water-saturated sample;
- b) measuring the characteristic relaxation times of the oil in the sample in the presence of water, in a zone close to saturation (S_{wir}) of the sample (column 2, lines 45-60);
- c) measuring the characteristic relaxation times of the water in the sample in the presence of oil, in a zone close to residual saturation (S_{or}) (column 4, lines 27-45);
- d) measuring the relaxation times of the sample in a state where its 100% oil saturation point is reached; and
- e) combining the measurements of the various relaxation times so as to obtain said index (column 9, lines 10-30).

7. With respect to claim 6, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that the relaxation times of stages a) to c) are measured after subjecting the sample to centrifugation (column 1, lines 25-40).

Art Unit: 2859

8. With respect to claim 7, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that the relaxation times of stage d) are measured after forced displacement of the fluids in the sample placed in a containment cell (column 1, lines 25-40).

9. With respect to claim 8, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that an oil whose intrinsic relaxation time (T_b) is as great as possible and as close as possible to that of the water is selected (column 6, lines 22-50).

With respect to claim 9, Baldwin discloses a method for measuring the wettability of a porous rock sample characterized in that the characteristic relaxation times are those corresponding to either the saturation curves maxima, or to mean values of said curves (column 5, lines 52-59).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252.

The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dixomara Vargas
Art Unit 2859
October 16, 2006



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800